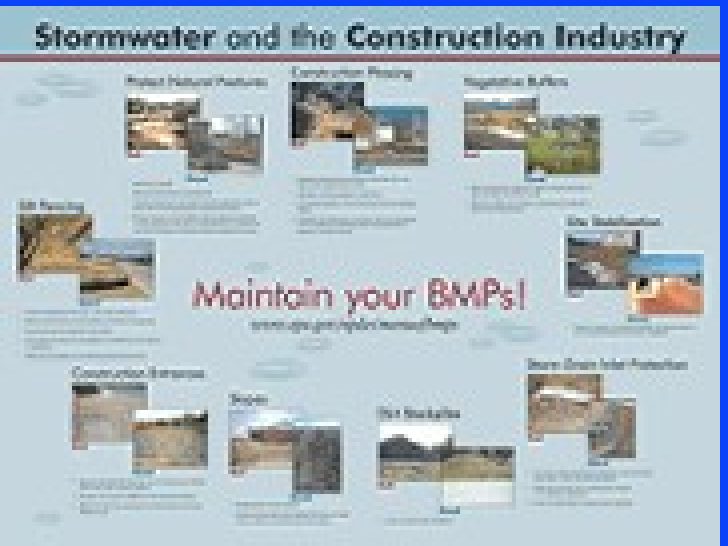
The Good, The Bad, and ~~The Ugly~~

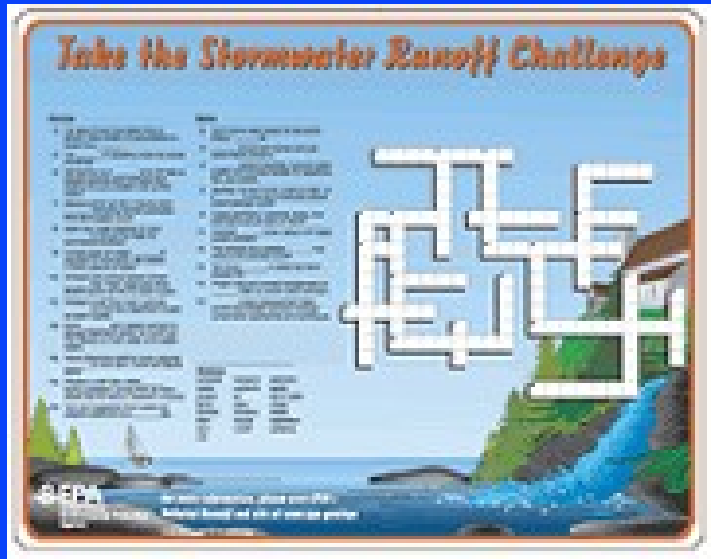
Creating Effective Outreach Materials

EPA Stormwater Outreach Materials

- Ready to Use
  - ~~"As is" or can be tailored~~
- Available on CD or online

www.epa.gov/npdes/stormwatermonth





"Watch Your Watershed" is the theme of October, Montgomery County's Watershed Month. Environmental organizations are holding events that celebrate watersheds throughout the month, beginning with a concurrent stream walk in the county's major watersheds on October 4. The stream walks will be family-oriented, each focusing on unique aspects of the watershed, such as botany, water quality, or local history. For information on the stream walks and other activities, see the calendar insert in this packet.

Montgomery County and the Philadelphia office of the United States Environmental Protection Agency have teamed up to promote public awareness of watershed resources. According to EPA spokesperson Hank Zygmunt:

> **"Education is needed because most people take a clean and healthy watershed for granted. Everyone can help protect waters for fishing, drinking, and enjoyment, through actions such as using less lawn chemicals, mulching gardens, and picking up after pets. County residents need to get involved and stay involved wherever life takes them. Your own backyard will always be part of one watershed or another."**

County residents can get involved by participating in any of the Watershed Month activities:

The county will recognize outstanding work done to protect watersheds through the Watershed Steward Award Program. Citizens, programs, and organizations may be nominated for the awards, based on their volunteer effort, water quality improvement accomplished, and the longevity of effort. Nomination forms are available through the county planning commission. The awards will be given by the Commissioners at the October 30 Commissioner's meeting.

> **The Watershed Steward Award Program encourages greater awareness of watershed issues and recognizes those whose actions have made a substantial contribution to the quality of their watershed.** - Michael Stokes, Assistant Director, Montgomery County Planning Commission

A Watershed Resource Directory for High School Teachers has been prepared to encourage teachers to include local watershed issues in their curriculum. The resource directory lists local organizations and information sources.

> **It is critical for the students we graduate to have an understanding of local environmental issues. The Watershed Resource Directory will help teachers develop a relevant watershed-based curriculum; one that affects students where they live .-** Jim Coffey, Science Teacher, Upper Perkiomen Valley High School

The county will be developing watershed maps to help familiarize local residents with the location and extent of their watershed. The maps depicting watershed boundaries, streams, and local landmarks will be distributed to municipal buildings, libraries, parks and schools. The maps will help residents make the connection between where they live and their local stream and watershed.

> **Each of us lives in a watershed, and our actions can either help or harm our watersheds. The condition of our watersheds in turn affects our quality of life. We encourage each resident to become involved with a local watershed during October watershed month. We hope your involvement will become a lasting habit, benefitting the watershed and all the residents of the community.** - Mario Mele, Chairman, Montgomery County Commissioners

For more information on the Watershed Awareness Program and watersheds in general, please contact the county planning commission at (610) 278-3733.

United States Environmental Protection Agency | Office of Solid Waste and Emergency Response (OS-305) | EPA/530-F-92-012 July 1992

Office of Solid Waste

EPA

Environmental Fact Sheet

RECYCLING GRASS CLIPPINGS

Nationwide, State and local governments, lawn equipment manufacturers, lawn care professionals, and others are working to divert yard trimmings from municipal solid waste. The U.S. Environmental Protection Agency (EPA) recommends leaving grass clippings on lawns, rather than collecting and bagging them. Leaving grass clippings on the lawn (1) enhances the natural health of lawns by improving the soil and turf growth, and (2) reduces the amount of waste that must be collected and managed.

Clippings Enhance Your Lawn

EPA recommends leaving grass clippings on lawns to reduce the amount of waste that must be collected and managed and to enhance the natural health of lawns. As short grass clippings filter to the ground and naturally decompose, nutrients return to the soil and support further turf growth by supplying part of the lawn's fertilizer needs. This practice can save about one fertilizer application per year.

Grass clippings increase the soil's organic matter content, along with its ability to retain moisture and nutrients, to resist erosion, and to maintain cooler temperatures during the summer.

The Texas A & M University System and the Texas Agricultural Extension report that clippings usually contain about four percent nitrogen, 0.5 percent phosphorous, and two percent potassium, as well as essential minor elements.*

Why Be Concerned About Grass Clippings?

Nationwide, state and local governments, lawn equipment manufacturers, lawn care professionals, and others are working to divert yard trimmings-including grass clippings, leaves, brush, and tree prunings-from municipal solid waste. By mid 1995, 20 states will have banned landfill disposal of yard trimmings, the second largest component of the solid waste stream. Nationally, yard trimmings account for nearly 20 percent (over 31 million tons) of municipal solid waste generated each year. Grass clippings account for over half of all the yard trimmings generated.

The amount of yard trimmings generated varies considerably by region, season, and even from year to year. During peak months (primarily, summer and fall), yard trimmings can represent as much as 25 to 50 percent of municipal solid waste.

Recycled/Recyclable
Printed with Soy/Canola Ink on paper that contains at least 50% recycled fiber

grow green

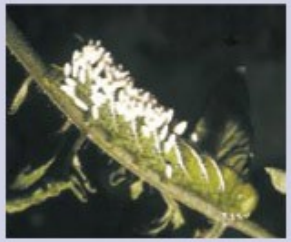
earth-wise guide to

Beneficial Insects

most insects aren't pests — some pollinate our flowers and vegetables, while many others feed on pests in our gardens. by allowing them to do their job, we can reduce the need for pesticides and improve austin's water quality.

resources

- *A Field Guide to Common Texas Insects* Drees & Jackman
- *The Texas Bug Book—the Good, the Bad, and the Ugly,* Malcolm Beck and Howard Garrett
- *Natural Enemies Handbook - The Illustrated Guide to Biological Pest Control* University of California Press
- *Common Sense Pest Control,* William Olkowski, et al.
- *http://hortipm.tamu.edu/pestprofiles/beneficials.html*



1. Know Who the "Good Guys" Are

- Learn to recognize the egg, larval, pupal and adult stages of beneficial insects
- Learn about their life-cycles and feeding habits
- Learn to recognize signs of beneficial insects at work, such as hollow-looking, tan-colored aphids, which are the remains of aphids that have been parasitized
- Don't be afraid of stinging insects like wasps and bees; they help pollinate garden vegetables and fruits and are only aggressive around their nests or when provoked

2. Have Patience

- It may take awhile for beneficial populations to build up to control a pest outbreak
- Be willing to tolerate a minor amount of damage
- Monitor outbreak areas to determine whether a population of beneficials is rising and may soon control a pest outbreak

Adult lady beetles (top); Parasitic wasp pupae on a tomato hornworm (left)

3. Make Wise Product Choices

- When spraying is necessary, select a narrow spectrum product whenever possible. Broad-spectrum insecticides don't discriminate between pests and beneficial insects- they kill both
- Choose an insecticide that won't harm other insect-eating garden creatures like birds, bats, spiders, lizards, and toads (see the Grow Green Products Fact Sheet for ratings)
- Treat only the area of the outbreak
- Choose products that break down quickly like soaps, oils, or pyrethrum sprays

4. Make a Home for Beneficials in Your Yard

- Provide an accessible source of water, such as a birdbath or periodic sprinkling
- Plant flowering plants that provide nectar for adult beneficials to feed upon; better nectar sources include plants with umbrella-shaped bloom heads (Yarrow, Anise, Dill), daisy-like flowers (Chamomile), and flowering herbs (Thyme, Pineapple Sage, Chives)
- Plant a few Tropical Milkweed or Gaura plants to maintain aphids for beneficials to feed on; the species of aphid they attract are not pests of most other landscape plants

Eye-Catching Outreach Materials

ONLY RAIN IN THE STORM DRA

Establish an identity

- Develop a logo
- Be consistent
- Use it everywhere!

Keep It Pure™
Don't pollute the watershed.

PASSPORT
ROCKDALE COUNTY
TO YOUR
WATERSHED
March 4, 2000
Salem High School
Rockdale County, Georgia
Sponsored by:
Rockdale County
9th and 10th Grade Double-Up Science Honors
Courtesy of: OAF
PASSPORT
TO YOUR
WATERSHED
March 4, 2000
Salem High School
TOO LOW
BEST WEIGHT
TOO HIGH

Eye-Catching Outreach Materials

Design

- 2/3 vs. 1/3 rule
- White Space
- Margins
- Typography (DON’T USE ALL CAPS; IT’S HARD TO READ!)
- Restraint

informative companion piece, such as an illustrated fact sheet or simple brochure to accompany the poster.

Watershed project displays at conferences, seminars, or outdoor events provide an excellent venue for sharing information, educating and involving citizens, promoting helpful actions, creating linkages, and building general awareness. You need to compose a display so it's as aesthetically appealing as a well-designed page. Use an engaging, flowing design that attracts attention, invites the viewer in, and leads the eye throughout. For example, if your display highlights your volunteer monitoring program, use a fishing net as the backdrop and include various sampling instruments in the display. Experiment with different fabrics to drape over the backdrop of your display to add texture. Wherever possible, show your program instead of telling it.

Avoid the common pitfall of pasting up dozens of 8- by 12-inch photographs with tiny captions underneath each one. Try blowing up a significant photograph to poster size and then use additional photographs to support the primary theme. Produce and distribute brochures or flyers to convey the details of your project. Again, focus on the objective—why you're at the event, what message you hope to deliver to which audience, and what you want to accomplish.

Tips for better displays

- *Make sure you can read the text from a comfortable distance*
- *Interactive is ideal—doing is always better than just seeing or reading*
- *Lure the kids with something fun, and the parents will follow*
- *Refrain from using your exhibit as a literature dump or that's where it will end up*
- *Be creative with design and layout, and do things on a big scale*
- *Use fabric and materials to make the display 3-dimensional*

Billboards

Billboards, like posters, can effectively present an outreach message or raise awareness if well-designed and attractive. Remember to link the billboard location to your target audience. For example, if your message is targeting boaters in coastal areas, your billboard location should be within several miles of the coast. Outdoor advertising venues can expose tens of thousands of people to your message, but be aware that some people find them patently offensive—especially on scenic rural roads. Billboards offer a chance to present highly compelling, noncommercial messages that can be engaging, artistic and memorable. Positive aspects of using a billboard include high reach (numbers of people), immediacy, and high frequency (number of times seen). Negatives include the fact that you can convey only a short message to a relatively nonspecified audience and it is difficult to evaluate the effectiveness of the message. Costs can also be considerable and are based on how many you buy, how long they are up, and the location.

Tips for better billboards

- *The message should change every 60 days or it will blend into the background*
- *Investigate display opportunities before designing or producing the ad*
- *Obtain at least three production/printing/display estimates*
- *Approach local businesses to request free display for public service ads*
- *Design a strong, simple ad that can be read quickly at a distance*

Bumper stickers

Bumper stickers are highly individualized traveling billboards. Since so many Americans spend so much time on the road, chances for message exposure through bumper stickers are excellent. Keep messages positive and focused on the objective (e.g., *Save the Bay*). Composition is easy: combine a catchy message with a piece of art and you're in business. Production options include everything from print shops to silk-screening in a garage. Choose a design you can see from a distance and a color that will beckon from a bumper.

Tips for better bumper stickers

- *Check popular sizes before finalizing your design*
- *Use a brief message presented in bold, large letters*
- *Keep graphics simple and easily recognizable*
- *Attach a mock-up to a bumper to ensure readability*

T-shirts and promotional items

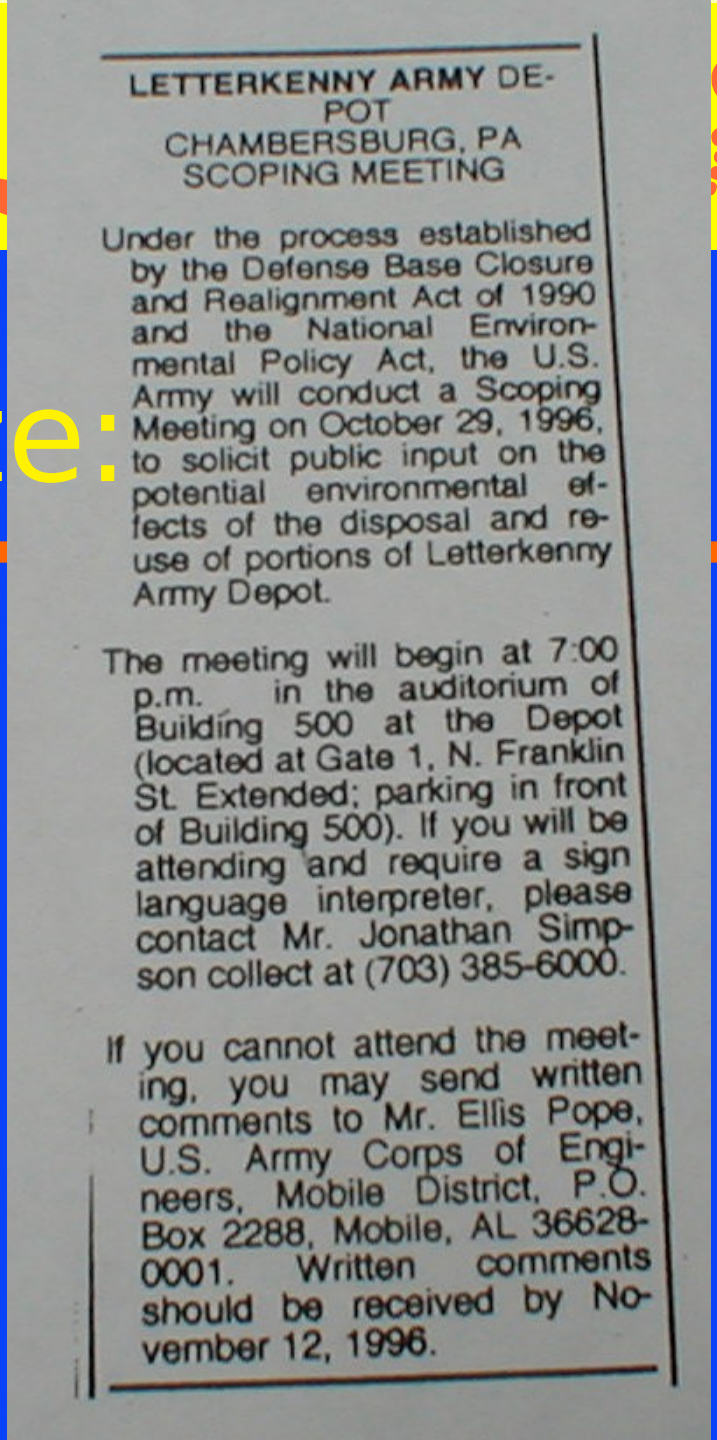
T-shirts and caps are popular items and "really get around" to help spread your message. Use your imagination on how best to conceive, design, and distribute them. Be sure to carefully consider cost, and don't be overly optimistic on sales income because sales rarely achieve expectations.

Eye-Catching Outreach Materials

Text

- Tell a story
- Don’t use acronyms
- Simplify
- Use examples
- Use active voice

Actual Size:
1.5” X 3”



LETTERKENNY ARMY DEPOT
CHAMBERSBURG, PA
SCOPING MEETING

Under the process established by the Defense Base Closure and Realignment Act of 1990 and the National Environmental Policy Act, the U.S. Army will conduct a Scoping Meeting on October 29, 1996, to solicit public input on the potential environmental effects of the disposal and reuse of portions of Letterkenny Army Depot.

The meeting will begin at 7:00 p.m. in the auditorium of Building 500 at the Depot (located at Gate 1, N. Franklin St. Extended; parking in front of Building 500). If you will be attending and require a sign language interpreter, please contact Mr. Jonathan Simpson collect at (703) 385-6000.

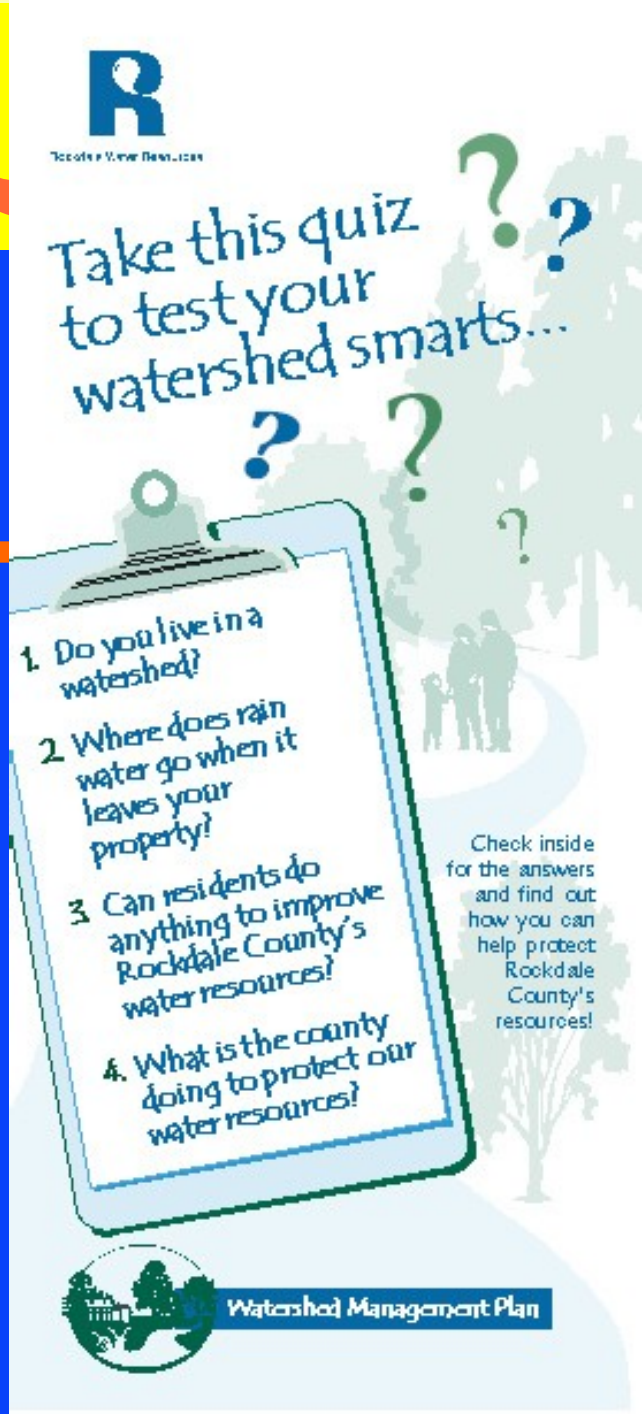
If you cannot attend the meeting, you may send written comments to Mr. Ellis Pope, U.S. Army Corps of Engineers, Mobile District, P.O. Box 2288, Mobile, AL 36628-0001. Written comments should be received by November 12, 1996.

Eye-Catching Outreach Materials

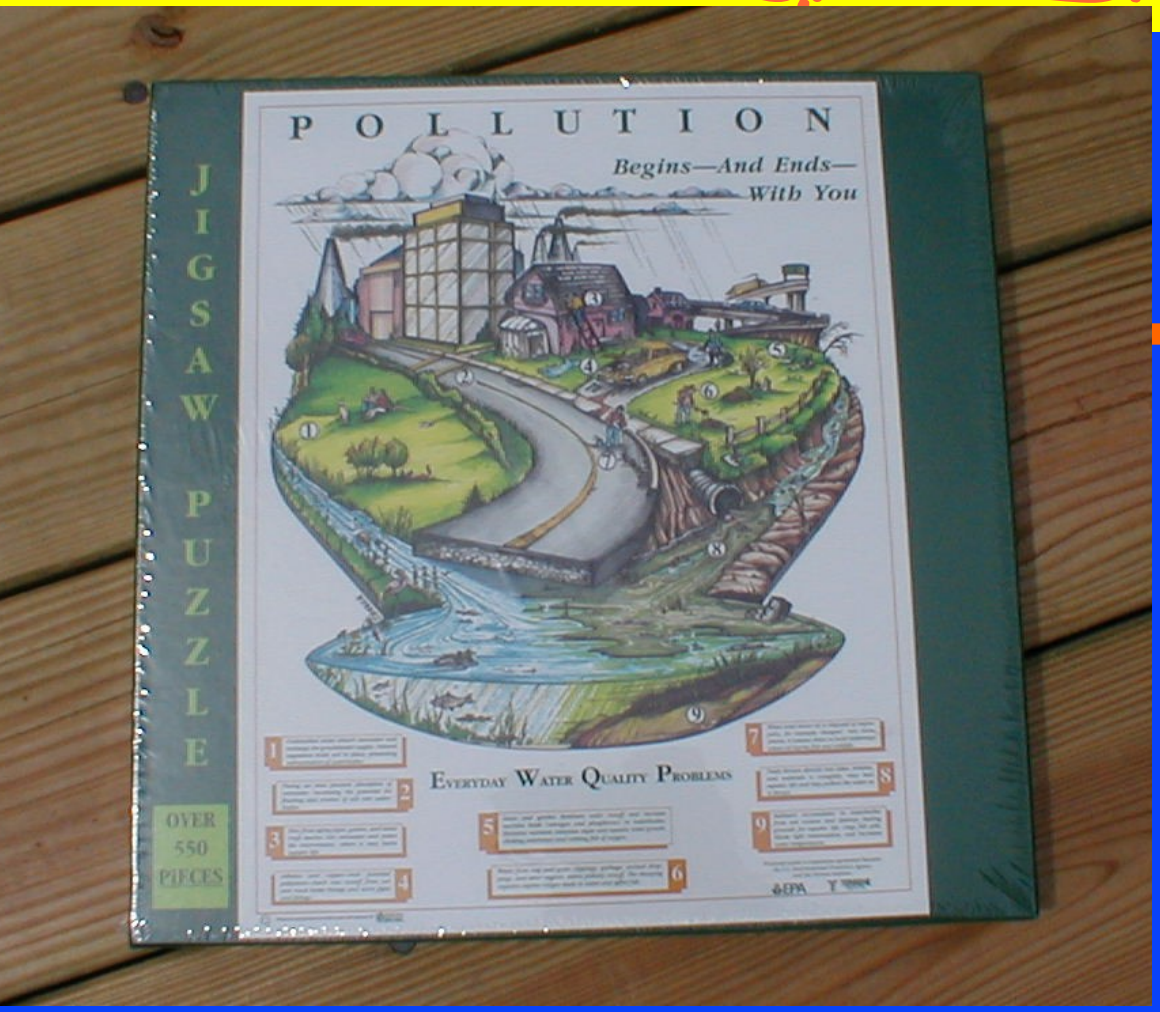
Hooks

- Piercing questions
- Startling facts
- Quizzes
- Contests
- Humor
- Games

Quizzes


Take this quiz to test your watershed smarts...
1. Do you live in a watershed?
2. Where does rain water go when it leaves your property?
3. Can residents do anything to improve Rockdale County's water resources?
4. What is the county doing to protect our water resources?
Check inside for the answers and find out how you can help protect Rockdale County's resources!
Watershed Management Plan

Puzzles


POLLUTION
Begins—And Ends—
With You
JIGSAW PUZZLE
OVER 550 PIECES
Everyday Water Quality Problems

Big Haynes Creek
Yellow River
Snapping Shoals
Honey Creek
South River

Keep Streams Clean—Scoop the Poop!

A Clean Water Education Activity

Grade Level:
Elementary

Duration:
Prep time: 10 minutes
Activity time: 10 minutes +

Subject Area:
Solutions to Water Pollution

Setting:
Open Space/Indoors or Outdoors

Objective:
In this simple and fun relay activity, participants will learn about one easy solution to water pollution. Participants will practice picking up after pets, in particular, dogs, whose waste contributes to the pollution of rivers, lakes and streams.

Materials:

- 4 trash cans (recommended with lids and labels for team names)
- Plastic "poop bags" (recommended minimum 1 bag per player)
- Playdoh (recommended minimum 50 pieces of "poop")
- Whistle (optional)

Background:
Pet waste can contaminate our rivers, lakes and streams. It contains harmful bacteria such as E. Coli and fecal coliform. Waters that contain a high amount of these bacteria are unfit for human contact. A single gram of pet waste contains an average of 23 million fecal coliform bacteria, some of which can cause disease in humans. Pet waste also affects the health of our waters. When pet waste decays it uses up dissolved oxygen and releases compounds that are harmful to fish and other animals that rely on water. It contains nutrients that can cause excessive algae growth, upsetting the natural balance of our rivers, lakes and streams.

Why should I pick it up? Pet waste left on sidewalks, streets, yards or other open areas can be washed away and carried by rainwater directly into storm drains and then to nearby rivers, lakes and streams.

The bad news is…It's your responsibility to "scoop the poop" but it's a small price to pay to protect our water quality.

The good news is…Whether in your yard or while walking your dog, you can easily do the right thing! Buy a "pooper scooper" or simply use a plastic bag. Place the waste in a trash can. Everyone will be happier when you pick up after your pet!

Keep Streams Clean—Scoop the Poop!
A Clean Water Education Activity

The Activity:

1. **Facilitators set the field.** Mark 4 relay lines using trash cans. Suggested team names include "Super Scoopers," "Poop Pros," "Stream Savers" and "Goodie Doodies." Scatter the Playdoh pieces throughout the playing field.

2. **Facilitators lead an orientation for the activity.** Ask participants if they have dogs. Ask participants if they pick up after their dogs. Talk about the importance of picking up after pets (see Background).

3. **Teams form and learn the relay rules.** Players divide into 4 teams of equal numbers. Players line up behind the team trash cans. Facilitators distribute a "poop bag" to each player. A facilitator demonstrates how to "scoop the poop" using a "poop bag."

4. **The relay begins.** On the whistle, the first players in line for each team enter the field. Players must collect 1 "poop" in their "poop bag," then return to their team trash can, tie the bag (1 tie), deposit the bag in the can, and go to the back of their team line (instruct players who have taken their turn to kneel or sit). The next player enters the field and so on. The 1st team to finish the relay wins!

5. **Challenge players** with additional or alternative relay rules:
   - Watch your step! If any player steps in "poop," that player's team is automatically disqualified from winning.
   - Color matters. From a field of multi-colored "poop," players must collect only the color of the facilitators' choice.
   - Time matters. Run the relay for a set number of minutes. The team that collects the most bags of "poop" in its team trash can wins.
   - Speed matters. Run the relay until all "poop" is collected. The team that collects the most bags of "poop" in its team trash can wins.
   - Size matters. If the group of participants is small (less than 20), consider using 2 instead of 4 teams.
   - …Can you think of other variations?

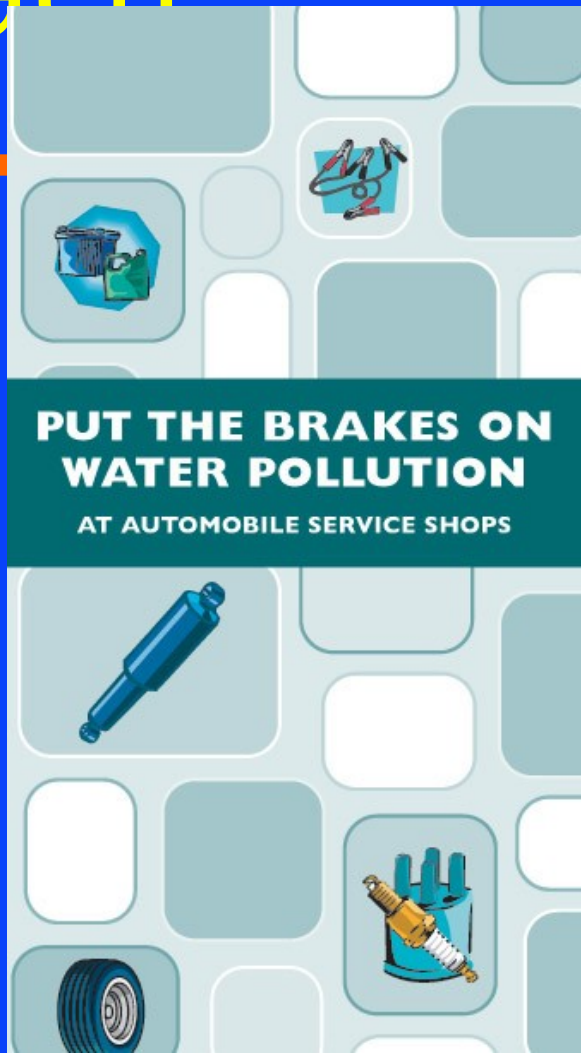
Wrap Up:

Facilitator congratulates the winning team and reminds participants about the importance of picking up after pets. Encourage participants to "scoop the poop" at home and to tell other family members about it.

Eye-Catching Outreach Materials

Graphics

- Less is more
- Clipart is free
- Use photos of people
- Use only good photos
- Use kids' artwork



do you know that:

- Rushing rainwater carries everything in its path to drainage areas leading to our streams and rivers?
- Improperly stored or handled chemicals, such as motor oil, as well as trash and debris, wash into the Anacostia River and the Potomac River during heavy rains?
- Pollutants in our rivers and streams kill aquatic life and create unsightly contamination that discourages investment and recreational opportunities?
- A storage or disposal mistake by one industrial facility could potentially affect everyone in the county?

Eye-Catching Outreach Materials

Color

- One-color vs. two-color
- Four-color
- Colored papers

ESTUARY NEWS
NEWSLETTER OF THE DELAWARE ESTUARY PROGRAM
Volume 10 / Issue 4
Summer 2000

INDICATORS WILL ASSIST THE PUBLIC IN PROTECTING THE DELAWARE ESTUARY

BY FORSYTH KINEON, PROGRAM COORDINATOR, DELAWARE ESTUARY PROGRAM

The Delaware Estuary Program has developed an initial suite of nine environmental indicators to assess the health of the estuary region – both on the land and in the water. The indicators will also provide an important benchmark from which the public, and organizations and agencies within the Delaware Estuary can gauge the success and impact of their efforts over time, and identify areas that need to be addressed.

The initial suite of nine indicators includes: American Shad Abundance; Dissolved Oxygen; Suitability of Estuary Waters for Swimming; Contaminated Sediments in the Estuary; Geographic Extent of Approved Shellfish Harvesting Areas; Developed Land and Population; Agriculture in the Delaware Estuary; Acres of Parkland; and Water Use Efficiency.

American Shad Abundance is one of the indicators. An increase in the number of shad suggests improved water quality and habitat. The survival of migratory fish is closely tied to dissolved oxygen (fish need oxygen to survive). In the past, pollution caused low dissolved oxygen levels in the heavily industrialized Philadelphia, Camden and Wilmington reaches of the river, thus blocking the passage of fish during their migration. Because of improved wastewater treatment and public consciousness about protecting water quality, fish passage is generally assured.

Indicators, however, don't tell the complete story. Indicators show overall trends, but do not account for anomalies such as natural fish die-offs. Even though dissolved oxygen has improved enough to support a diversified fish population, there are still fish kills occurring. In late June, near Pennsylvania's Tullytown Cove, there was a significant die-off of carp, along with some sunfish and perch. This die-off was brought about by a common bacterium that causes periodic fish kills. This bacterium is not a result of poor river quality, just as a common cold is not an indicator of bad health for people.

The "picture" of the estuary through indicators has positive as well as negative messages. The Shellfish Harvesting Area indicator shows that there are more shellfish beds open, which suggests improved water quality. We are also using less water, even though the population in the Delaware Estuary region is increasing. This means we are getting better at conserving water. On the other hand, the Delaware River continues to have significant water quality problems, including toxins. The sources that contribute to this contamination include industrial and municipal dischargers, nonpoint sources of pollution like stormwater runoff, and water dependant activities such as shipping. Toxins that are found in the sediments are derived from these sources. Another contributor to this situation is the fact that the Estuary supports the world's largest fresh water port, the second largest refining-petrochemical center in the nation and one of the world's greatest concentrations of heavy industry.

The overall message from this small set of indicators is encouraging. Much of the water quality and habitat is improving. However, there is plenty of work still to be done. The implementation teams and advisory committees of the Delaware Estuary Program are busy implementing these improvements. Citizens can also help through actions such as recycling of motor oil, participating in river clean-ups, or involvement in restoration activities in their watersheds.

The initial nine indicators will be available on www.delep.org, later this summer. Stay tuned as additional indicators are made available which will include information to further efforts of citizens in improving their Delaware Estuary.

A message from the Program Coordinator will be a regular feature of this newsletter.

Community WaterWatch

PARTICIPANTS MANUAL

Updated - November 2001

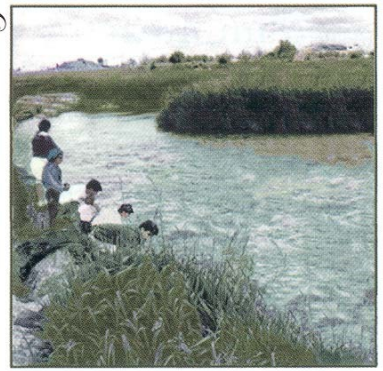
MONROE COUNTY

Monroe County Department of Health

Jack Doyle
County Executive

Andrew S. Doniger, M.D., M.P.H.
Director, Department of Health

Community WaterWatch Program



Monroe County *Community WaterWatch Program*

You can make a difference....

Volunteer today!

Where Does the Public Obtain Information on Water Issues?

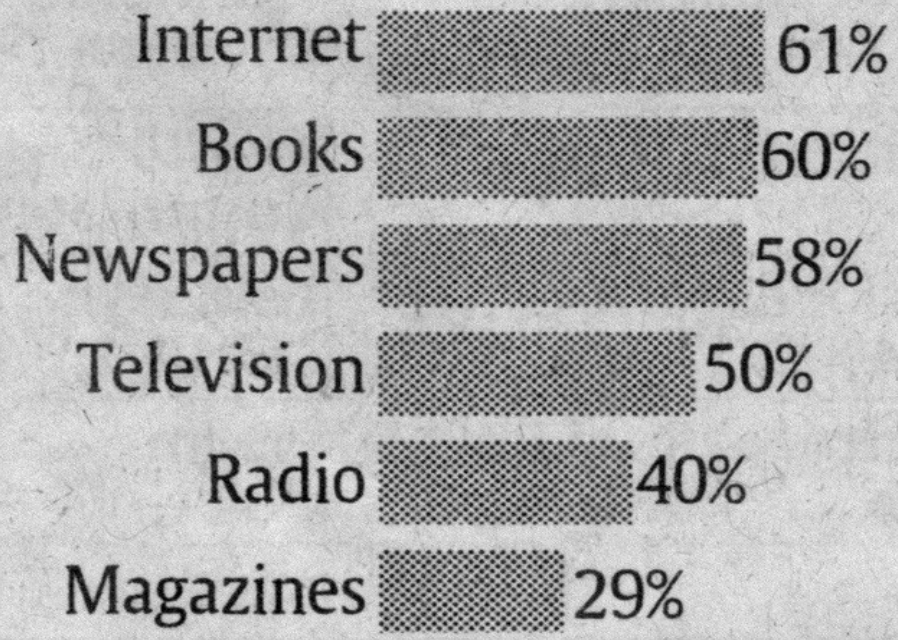
Local television news	47%
Local newspapers	27%
Radio news programs	18%
Friends, family, neighbors	4%
Environmental mailings	2%
Community leaders	1%

92%

Source: Lake Research Inc; for the Upper Mississippi Basin

Net gains credibility

The percentage of Internet users who consider these sources of information important:



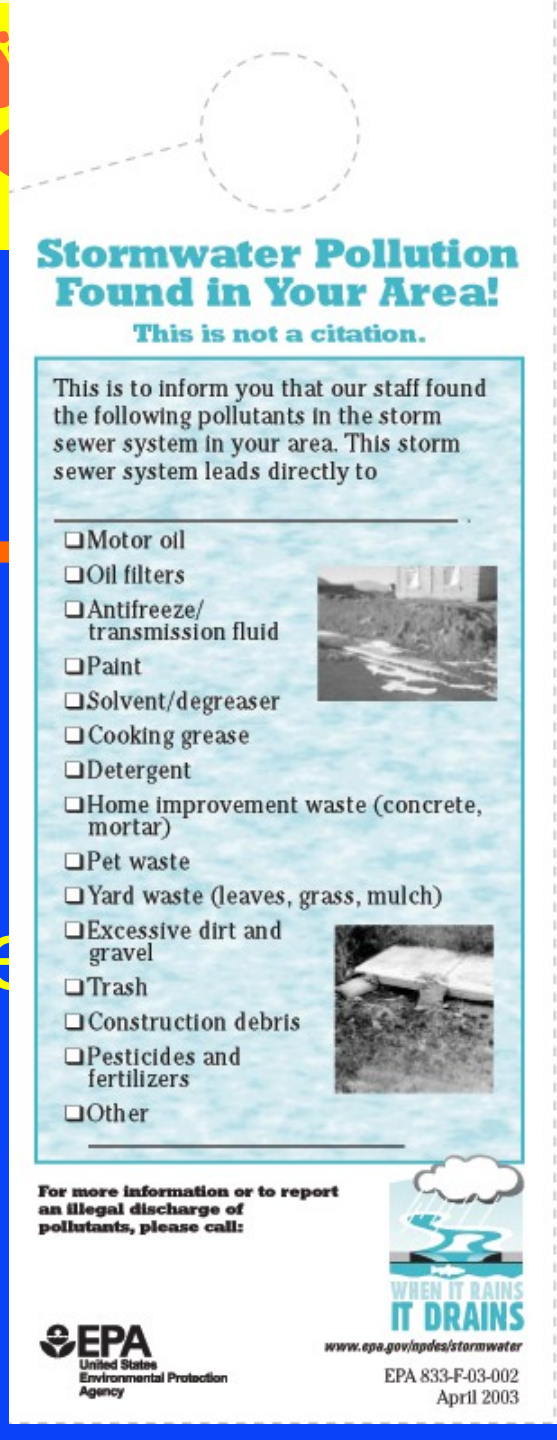
Source: UCLA Internet project

By Suzy Parker, USA TODAY

Formats

Brochures and Fact Sheets

- Can be distributed widely
- Provide more detail on issue
- Different shapes and sizes



Stormwater Pollution Found in Your Area!

This is not a citation.

This is to inform you that our staff found the following pollutants in the storm sewer system in your area. This storm sewer system leads directly to

- ❑ Motor oil
- ❑ Oil filters
- ❑ Antifreeze/ transmission fluid
- ❑ Paint
- ❑ Solvent/degreaser
- ❑ Cooking grease
- ❑ Detergent
- ❑ Home improvement waste (concrete, mortar)
- ❑ Pet waste
- ❑ Yard waste (leaves, grass, mulch)
- ❑ Excessive dirt and gravel
- ❑ Trash
- ❑ Construction debris
- ❑ Pesticides and fertilizers
- ❑ Other

For more information or to report an illegal discharge of pollutants, please call:

WHEN IT RAINS IT DRAINS

www.epa.gov/npdes/stormwater

EPA United States Environmental Protection Agency

EPA 833-F-03-002
April 2003

If you have a septic system...

Septic systems can provide long-term, effective treatment of household wastewater if properly designed, constructed, and maintained.

Things to keep in mind:

- ✓ Inspect your system (every 1 to 3 years) and pump your tank (as necessary, generally every 5 years).
- ✓ Use water efficiently.
- ✓ Don't dispose of household hazardous wastes in sinks and toilets.
- ✓ Plant only grass over and near your septic system. Roots from nearby trees or shrubs might clog and damage the drainfield.
- ✓ Don't drive or park vehicles on any part of your septic system. Doing so can compact the soil in your drainfield or damage pipes, tank, or other septic system components.

Not in My Septic System!

X Cloggers
diapers, cat litter, cigarette filters, coffee grounds, grease, feminine hygiene products, etc.

X Killers
household chemicals, gasoline, oil, pesticides, antifreeze, paint, etc.

For more information, contact:

U.S. Environmental Protection Agency,
www.epa.gov/owm/onsite

Formats

Flyers, Posters, and Billboards

- Memorable
- Concise
- Strategically placed
- Awareness builders and prompts

Preventing Polluted Runoff

Everybody's Business

pet waste, fertilizer, chemicals, auto fluids

Homeowners can prevent polluted runoff by using fertilizers and chemicals sparingly, maintaining septic systems, and picking up pet waste.

nutrients, pesticides, sediment

Farmers can prevent polluted runoff by managing soil and animal feeding operations and buffering streams with native trees and plants.

oil, heat, road salts, sediment, chemicals

Developers and planners can prevent polluted runoff by using low impact development and providing structural and nonstructural controls.

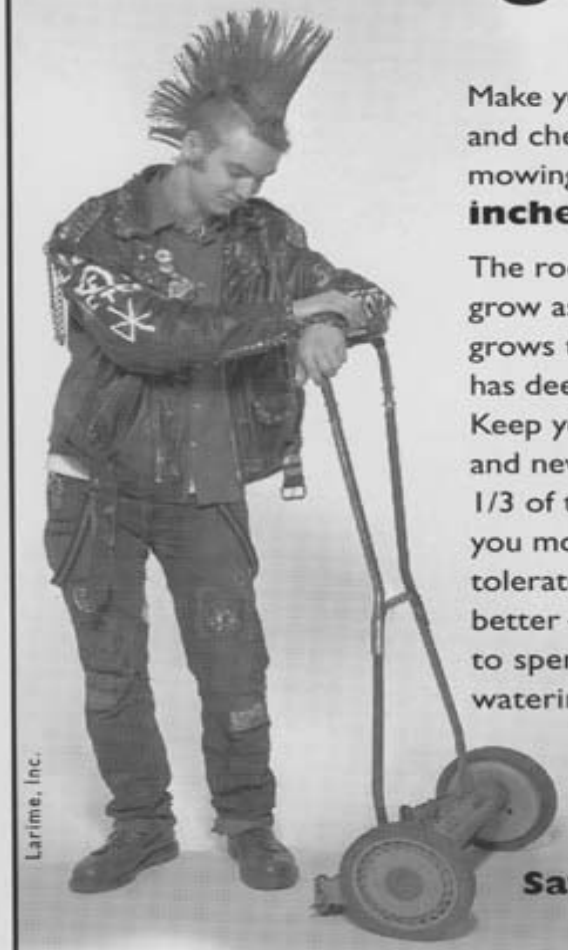
EPA United States Environmental Protection Agency

EPA 841-H-03-001

Printed with soy-based inks on recycled paper.

For more information, visit www.epa.gov/nps

Got grass?
Mow high!



Larime, Inc.

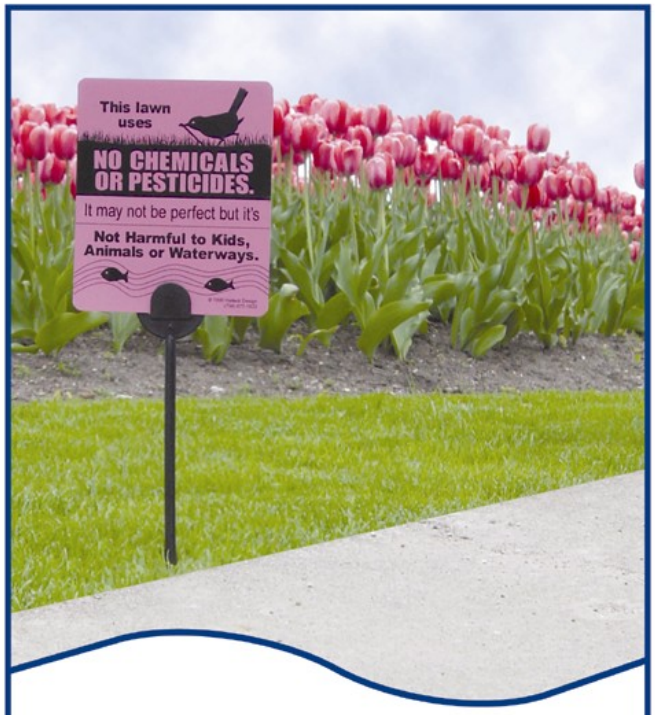
Make your lawn easier and cheaper to maintain by mowing high – **three inches** is the rule!

The roots of your lawn grow as deep as the grass grows tall, so taller grass has deeper, healthier roots. Keep your lawn 3" or higher and never cut off more than 1/3 of the blade each time you mow. A healthy lawn tolerates hot, dry weather better – so you won't need to spend your summer watering and fertilizing.

Mow high.
Save time and **money**.
It's that **easy**.

A partnership of the Huron River Watershed Council, City of Ann Arbor, Edward Surovell Realtors, Michigan Groundwater Stewardship Program, Van Buren Township, Village of Milford, Ypsilanti Township, USEPA and MDEQ.

Want more information? Call the **Huron River Watershed Council** at **734-769-5123** and ask for a free tip card.



Is Your Yard to Die For?

Pesticides kill bugs. They can also do serious damage to the things we love the most, our family and pets. Pesticides can wash into nearby waters and harm other things we love – fish and fish food (aquatic bugs).

Pests are annoying but polluted water is worse.

Try proven safe remedies to protect plants from pests:

- Stop aphids by applying soapy water to plants.
- Drown slugs in saucers of beer.
- Discourage mosquitos by removing standing water.

Ready for a rainy day?
For more stormwater pollution prevention tips contact us at:

Tip of the Mitt Watershed Council

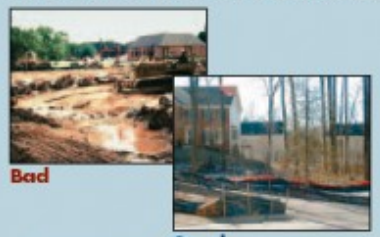
426 Bay Street, Petoskey, MI 49770
P: 231.347.1181
www.watershedcouncil.org

Ad Sponsored By:

CEMEX

Stormwater and the Construction Industry

Protect Natural Features



Bad

Good

- Minimize clearing.
- Minimize the amount of exposed soil.
- Identify and protect areas where existing vegetation, such as trees, will not be disturbed by construction activity.
- Protect streams, stream buffers, wild woodlands, wetlands, or other sensitive areas from any disturbance or construction activity by fencing or otherwise clearly marking these areas.

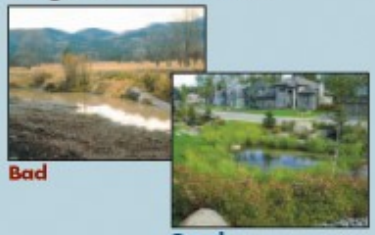
Construction Phasing

Bad

Good

- Sequence construction activities so that the soil is not exposed for long periods of time.
- Schedule or limit grading to small areas.
- Install key sediment control practices before site grading begins.
- Schedule site stabilization activities, such as landscaping, to be completed immediately after the land has been graded to its final contour.

Vegetative Buffers

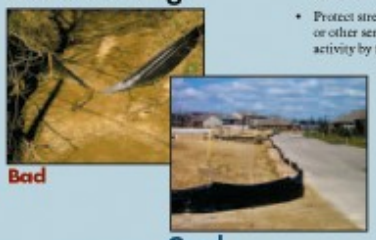


Bad

Good

- Protect and install vegetative buffers along waterbodies to slow and filter stormwater runoff.
- Maintain buffers by mowing or replanting periodically to ensure their effectiveness.

Silt Fencing



Bad

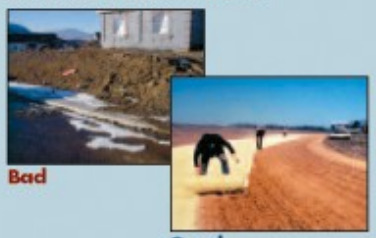
Good

- Inspect and maintain silt fences after each rainstorm.
- Make sure the bottom of the silt fence is buried in the ground.
- Securely attach the material to the stakes.
- Don't place silt fences in the middle of a waterway or use them as a check dam.
- Make sure stormwater is not flowing around the silt fence.

Maintain your BMPs!

www.epa.gov/npdes/menuofbmps

Site Stabilization



Bad

Good

- Vegetate, mulch, or otherwise stabilize all exposed areas as soon as land alterations have been completed.

Construction Entrances

Bad

Good

- Remove mud and dirt from the tires of construction vehicles before they enter a paved roadway.
- Properly size entrance BMPs for all anticipated vehicles.
- Make sure that the construction entrance does not become buried in soil.

Slopes

Bad

Good

- Rough grade or terrace slopes.
- Break up long slopes with sediment barriers, or under drain, or divert stormwater away from slopes.

Dirt Stockpiles

Bad

Good

- Cover or seed all dirt stockpiles.

Storm Drain Inlet Protection

Bad

Good

- Use rock or other appropriate material to cover the storm drain inlet to filter out trash and debris.
- Make sure the rock size is appropriate (usually 1 to 2 inches in diameter).
- If you use inlet filters, maintain them regularly.

IMPERIAL
WE "ALL" LIVE DOWNSTREAM.
Protect Your Watershed.
Illinois Environmental Protection Agency
CELEBRATE EARTH DAY APRIL 22

ISSAQUAH
CREEK
THIS SALMON
SPAWNING
STREAM IS
IN YOUR CARE

"Only Rain Down The Storm Drain"

Soapy runoff from washing your car can harm creek life even if biodegradable soaps are used.

Wash your car on gravel or grass or use a commercial car wash.

City of Santa Rosa
Public Works Department
Phone: 543-3467
Visit our website under Storm Water

Formats

Displays

- Grab people's attention
  - *30 second rule*
- Save text for handouts or brochures
- Bigger is better

Delaware's Riparian Buffers

Building a line of defense to protect our state's waters

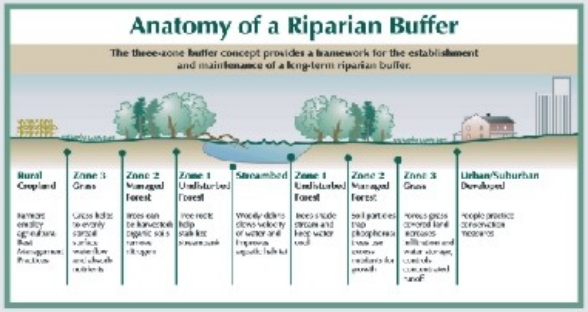
What Are Riparian Buffers?

Riparian buffers are transition areas between water and land. They link terrestrial upland ecosystems to stream, river, lake, or wetland ecosystems. Buffers can be strips of grassy land leading to the water's edge or thickly forested streamside areas.

Proper planning and design are the keys to maximizing the water quality benefits of riparian buffers. Delaware's Department of Natural Resources and Environmental Control (Division of Soil and Water Conservation) recommends a three-zone riparian buffer design.

Anatomy of a Riparian Buffer

The three-zone buffer concept provides a framework for the establishment and maintenance of a long-term riparian buffer.



Benefits of Riparian Buffers

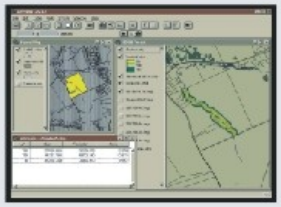
- Protecting and improving water quality
- Protecting and improving wildlife habitat and biodiversity
- Preserving floodplains and wetlands
- Protecting against erosion and preserving stream characteristics
- Providing recreational and aesthetic value

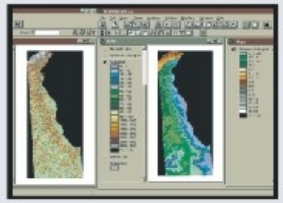
©Rand A Simpson/WIRED

Delaware's Pea Patch Island hosts one of the largest heronries on the east coast, supporting more than 3,000 nesting pairs of herons, egrets, and ibises. Delaware's riparian buffers help protect their delicate breeding and feeding grounds.

Riparian Buffer Analysis System

The Division of Soil and Water Conservation launched the Delaware Riparian Buffer Initiative to create a set of comprehensive site-specific riparian buffer criteria. The resulting Riparian Buffer Analysis System is a new geographic information system (GIS) that will enable planners, landowners, farmers, and resource managers to increase the use and effectiveness of riparian buffers. It will also help target urban and agricultural areas.





The Riparian Buffer Analysis System will house new riparian buffer designs that specify width, vegetation type and distribution, and local conditions in Delaware's watersheds. It combines layers of information like soil types, vegetation, and endangered species found in a particular area to provide a better understanding of what kind of buffer would be best for that area.

This new GIS application will create a defensible buffer design for each priority goal of the Delaware Riparian Buffer Initiative—surface water quality enhancement, nutrient runoff reduction, bank stabilization, erosion control, and habitat protection for key species.

Improving the science of riparian buffers

EPA

NOAA

Clean Water is Everybody's Business

Protecting Water Quality from Nonpoint Source Pollution

10 Things You Can Do

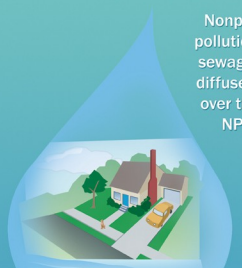
- Use fertilizers sparingly and sweep up driveways, sidewalks, and roads.
- Never dump anything down storm drains.
- Vegetate bare spots in your yard.
- Direct downspouts away from paved surfaces.

- Take your car to a car wash instead of washing it in the driveway.
- Check your car for leaks, and recycle motor oil.
- Minimize pesticide use and learn about Integrated Pest Management (or IPM, for short).
- Compost your yard waste.
- Pick up after your pet.

- Have your septic tank pumped and system inspected regularly.

What Is Nonpoint Source Pollution?

Nonpoint source (NPS) pollution is polluted runoff. Unlike pollution from specific (point) sources such as factories and sewage treatment plants, NPS pollution comes from many diffuse sources. It is caused by rainfall or snowmelt moving over the land and through the ground. This runoff picks up NPS pollution and carries it into our Nation's waters, harming aquatic habitats and contaminating drinking water supplies.



Common sources of polluted runoff at home include grass clippings and car wash runoff, as well as household chemicals and fertilizers that aren't properly applied or disposed of.

Rainwater picks up oil, heat, and grime from city streets and carries them through storm sewers to our Nation's waters.

Sediment, nutrients, and pesticides from farm lands can be carried by rain water or improper irrigation and can harm lakes, rivers, streams, and groundwater.

Properly maintaining your septic system can prevent unwanted bacteria and nutrients from entering streams, lakes, and wells.

Pet waste is a common source of bacteria and nutrients present in streams and lakes.

What Is EPA Doing?

Partnerships:

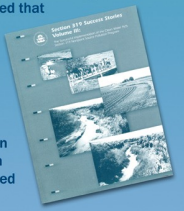
- EPA has developed partnerships with states and tribes to help them identify, prioritize, and solve NPS pollution problems. For more information, visit www.epa.gov/nps/partnership.html.
- EPA provides technical support and expertise for local and regional activities, often in cooperation with other federal agencies.

Public Outreach:

- EPA develops fact sheets, posters, brochures, and other materials to help spread the word about the importance of preventing polluted runoff. These materials are available on the web at www.epa.gov/nps.

Grants:

- Section 319 of the Clean Water Act directed states to establish programs to address NPS pollution. EPA distributes section 319 funds to states and tribes to help them to implement their NPS management programs. Through these programs, best management practices are implemented that reduce the amount of pollutants entering waterways.



Guidance:

- EPA is developing a series of documents that will provide guidance for implementing specific NPS management measures. The following management measures guidance documents have been developed in draft or final form: agriculture, forestry, marinas, urban areas, and wetlands. These documents may be accessed at www.epa.gov/owow/nps/pubs.html.
- EPA also develops guidelines for granting and receiving section 319 grants.

Formats

Web Sites

- Reach larger audiences
- Adaptable
- Low-cost

Formats

Make Sure Your Web Site:

- Is functional for disabled persons
- Has a short download time
- Doesn’t have too many software requirements (plug-ins, etc.)
- Has up-to-date information
- Isn’t just text

Links Google Address http://www.thinkbluemaine.org/ Go

think blue

clean water starts with you!

Storm Water in my City/Town

Storm Water Protection in Maine

What can I do?

Kid's Pages

Educator's Pages

Citizen's Pages

Links to other places:

Casco Bay Estuary Project

Center for Watershed Protection

Environmental Protection Agency

Maine Stream Team

Watershed Development in Maine

Wells Reserve

Welcome to the Maine Storm Water Website

This site was created to inform the public about storm water pollution issues.

Keep reading to find out how stormwater can become polluted and what you can do to help:

Q: How does storm water become polluted?
A: It's the little things that really add up. Storm water can become polluted from all the little things that we do:

One car leaking oil on to a parking area is not such a bad thing, but when there are hundreds and thousands of cars leaking oil, and then it rains, well, all that oil gets washed away somewhere – and that somewhere is usually right into a water body – the stream that runs behind your house, that is storm water pollution.

One little cigarette butt is no big deal, right? One little piece of gum, one little piece of litter – but where does that end up? – unless someone else

Internet

Back | Search | Favorites | History

Links | Google | Address | http://www.thinkbluesd.org/ | Go

ACT BLUE

Storm Water Pollution Prevention Program
THINK BLUE
You're the solution to storm drain pollution.
"Protecting our beaches, bays, and watersheds"

- THINK BLUE SAN DIEGO!
- YOUR HOME
- LITERATURE
- PLAY VIDEO
- FOR STUDENTS
- RESOURCES & LINKS

ENGLISH SPANISH

- Info Request Form
- Calendar of Events
- Press Releases
- Industrial Facilities

2003 URMP Online Now!

Look in Literature under
Urban Runoff Management

Caltrans | THE CITY OF SAN DIEGO | Unified Port of San Diego | project clean water

Swell
Stewardship: Water Education for Lifelong Leadership

Home | Think Blue San Diego! | Your Home | Literature
Play Video | For Students | Resources & Links

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Think Blue Site designed by ePangea

PRE-REGISTER NOW!
URBAN RUNOFF
October 16, 2004

Applet News started | Internet

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Links Google Address http://www.psat.wa.gov/Programs/Pie_Ed/Water_Ed_Materials.htm Go

PUGET SOUND ONLINE

puget sound action team

About the Sound | Who We Are | What We Do | Publications | Calendar | Site Index

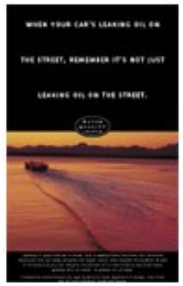
Water Quality Education Materials: Nonpoint Source Pollution Tool

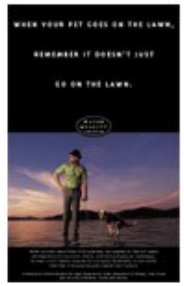
You can order and use Water Quality Education Materials to educate the general public about what nonpoint pollution is, why it is a problem, and what specific actions people can do about it. The Puget Sound Action Team is offering the materials that the Washington Department of Ecology, King County, and cities of Bellevue, Tacoma and Seattle originally produced in 1995 and made available to others to use in promoting good water quality.

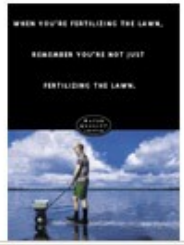
The nonpoint source pollution activities shown in the education materials include: stormwater runoff from cars, pet waste, car washing, and fertilizer/pesticide use.

The award-winning materials to choose from include posters*, educational fliers, and TV advertisements on VHS and Beta tapes. Local and state governments, environmental organizations and others throughout the United States and other countries have also purchased

Go to Order Form and Guidelines







Done Internet

www.psat.wa.gov/Programs/Pie_Ed/Water_Ed_Materials.htm

File Edit View Favorites Tools Help

Back Search Favorites Media

Links Google Address http://www.ci.eugene.or.us/splashweb/ Go

What's New?

Water Cycle

Water Habits

Ecosystems

Creeks and Rivers

Links

SPLASH!

Stormwater Pollution: Learn and Share

Hi! I'm Lily, the Pacific green tree frog. Welcome to the SPLASH! homepage. Click on the pictures of my friends to learn about stormwater and the water cycle, explore a pond ecosystem, play a game, or learn about our local creeks and rivers!

TEACHERS!

Click here to download curriculum

City of Eugene

Stormwater Education

Dripppy the raindrop

I'm Drippy, the raindrop.
Together, we can learn about
the water cycle and stormwater.

I'm Rex, the kingfisher.
Fly with me to learn about
good water use habits!

I'm Patty, the popcorn flower.
Let's explore wetland ecosystems!

I'm Dougie, the dragonfly.
Let's learn about local
creeks and rivers!

Last Edited April 23, 2004

http://www.ci.eugene.or.us/splashweb/habits.html Internet

Formats

Presentations

- Get others to do your work
- I know you can’t read this, but….
- Photo montage
- Bring backup transparencies

Format

Events (public and targeted)

- Community meetings
- Presentations to elected officials
- Construction site demo field days
- Volunteer monitoring
- Field tours
- Connect people to the resource

Format: Displaying the Message

Activities

- Volunteer citizen educators
- Educational programs for children
- Storm drain stenciling
- Stormwater hotlines
- Tributary signage
- Festivals
- Tributary clean ups

Formats

Stuff

- Magnets
- Tote bags
- Water bottles
- Drink cozies
- Mouse pads
- Videos

CALL
560-SWIM
To Report Water
Pollution
STORM WATER
HOTLINE
Not in
My
Septic
System!
Next Service:
Company:
Phone:
PASSPORT
TO YOUR
WATERSHED
March 4, 2000
10 Things That Make a Difference
Ports

Formats

Radio PSAs

- Radio reaches 96% of adults each week
- Generally 30 seconds
- Play for free or pay for airtime?
- Success depends on air times and frequency
- Hiring a production company will improve quality
- Reduce costs by sending in scripts
- Consider first before TV

Formats

TV PSAs

- Can also be free or paid
- Generally 30 seconds
- Can be expensive; but have wide impact
- Use local celebrities if possible
- Don’t produce it yourself unless you are qualified

Example PSAs

- Video PSAs
  - *Hawaii*
  - *Texas Agricultural Service*
  - *Austin, TX – Clean Water Campaign*
- Radio PSAs
  - *Grand Rapids, MI – Water Drop Series*
  - *Texas Natural Resources Conservation Commission/Texas Commission on Environmental Quality (TCEQ)*
  - *LA, CA Project Pollution Prevention*

So What Does It Cost?

Saving $$

- Graphic Designer
  - Own graphics and photos
  - Finalize text
- Printer
  - The more you buy, the cheaper each item costs
  - Don’t keep taking it to the printer-charged a set up fee each time you print
  - Don’t have to use local printer-shop around

So What Does It Cost?

Printed Materials

- Printed fact sheets (1,000)
  - *Black ink $100*
  - *One-color $600*
  - *Two-color $840*
  - *Four-color $960*

So What Does It Cost?

Printed Materials

- Brochures
  - *6-panel, 2-color, tri-fold $2,100 (for 1,000)*
  - *6-panel, 4-color, tri-fold $2,400 (for 1,000)*

So What Does It Cost?

Printed Materials

- Posters
  - *4-color, 2-sided, 11X17 folded $1.00*
  - *3'X4' laminated poster $150*
  - *3'X4' laminated on foam core $200*
- Billboards $700-$1,000/month

So What Does It Cost?

Stuff

- Stickers $.07 @/1000 (1-color, 3”circle)
- Magnets $.30 @/1000 (2-color business card size)
- Frisbees $.68 @/1000 (8”)
- Lapel pins $1.15 @/1000 (1-color)
- Tote bags $3.10 @/1000 (1-color, 2-sided)

So What Does It Cost?

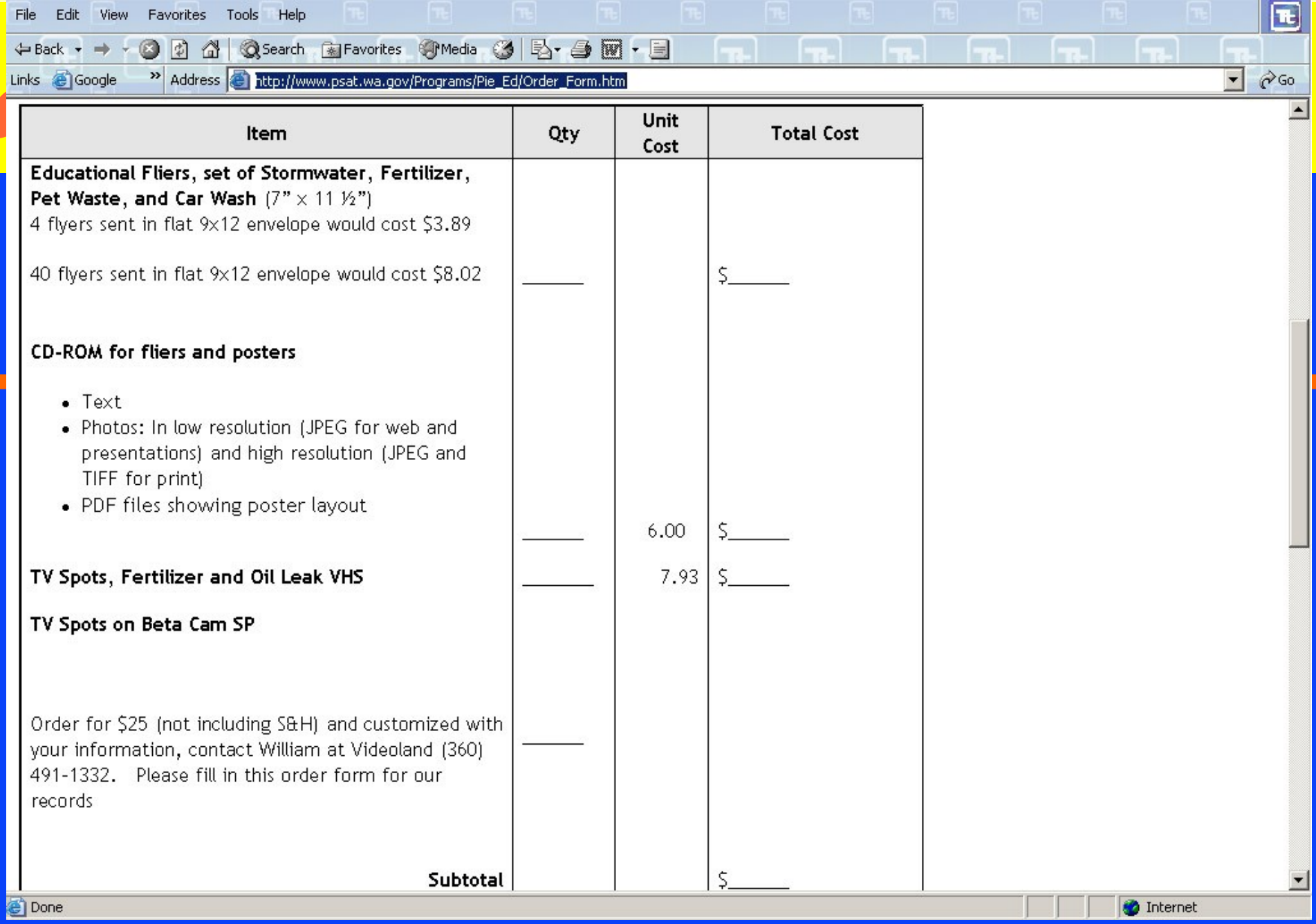
Other

- Bus Advertisement Panels
  - *Interior: $100 - $150 for 20-60 buses*
  - *Exterior: $1240/month per bus Tabletop or floor displays - $2,000 - $5,000*
- Movie theater ads
  - *$1400/week in 16 theaters*

So What Does It Cost?

Other

- Radio PSA
  - *$1,500 to $10,000*
- TV PSA
  - *$20,000 to $60,000 (not including air time)*
  - *~$10,000/minute*



Item	Qty	Unit Cost	Total Cost
Educational Fliers, set of Stormwater, Fertilizer, Pet Waste, and Car Wash (7" x 11 ½") 4 flyers sent in flat 9x12 envelope would cost $3.89 40 flyers sent in flat 9x12 envelope would cost $8.02	_____		$_____
CD-ROM for fliers and posters • Text • Photos: In low resolution (JPEG for web and presentations) and high resolution (JPEG and TIFF for print) • PDF files showing poster layout	_____	6.00	$_____
TV Spots, Fertilizer and Oil Leak VHS	_____	7.93	$_____
TV Spots on Beta Cam SP Order for $25 (not including S&H) and customized with your information, contact William at Videoland (360) 491-1332. Please fill in this order form for our records	_____		
Subtotal			$_____

http://www.psat.wa.gov/Programs/Pie_Ed/Order_Form.htm

Don’t Forget!

- Get it reviewed before layout
- Show your enthusiasm in your materials
- Experiment
- Dare to be different
- Remember, there’s no “right” or “wrong” way

Don’t Forget!

- Have FUN!!!

Learning From Others:

Stormwater Outreach Programs From Around the Country

City of Honolulu Clean Water Program

Audience:

- 1 million people in 600 square miles: urban residents, tourists, businesses, and farmers

Goals:

- Help public better understand NPS pollution so they change behavior
- Build relationships with community and environmental organizations
- Train the youth to protect the environment for future generations

City of Honolulu Clean Water Program

Messages:

- Keep streams and beaches clean.
- Don't flush toxins or trash into storm drains
- Be part of the solution and not the pollution!
- Help protect our waters... For life!
- What we do on land directly affects the ocean

City of Honolulu
Clean Water Program

Formats:

- 14 TV PSAs (available on-line)
- Presentations
- Events, contests, “Adopt-a-Stream” program
- Storm drain stenciling (in English and Hawaiian)
- Web site: www.cleanwaterhonolulu.com
- Bus posters, banners
- Mascot (O'opu fish) used on materials

Cost: $150,000/year

City of San Diego Think Blue Program

Audience:

- 12 million: urban, suburban, and beachfront residents and businesses

Goals:

- Reduce beach postings and closings by 50 percent compared to baseline in 2001
- To encourage city staff and the public to adopt pollution prevention behaviors and practices

City of San Diego Think Blue Program

Messages:

- Our future is our legacy – don’t trash our future
- Storm drains empty into waterways, not sewage treatment plants
- Everything in the street goes to our beaches
- Use a broom not a hose; Scoop the poop

SCOOP THE POOP!
SCOOP THE POOP!
SCOOP THE POO

City of San Diego Think Blue Program

Formats:

- TV, radio, and movie theater slide PSAs
- News story features on TV and in local printed media
- Web site: www.thinkbluesd.org
- Community events, speakers bureau, giveaways
- Employee ambassadors (each staff member educates their community)
- School curriculum

Cost: $400,000/year (not incl. staff)

City of Griffin, GA

Audience:

- 23,500 urban residents and businesses

Goal:

- Educate public about storm water management

Messages:

- Prevent nonpoint source pollution
- Storm drains lead directly to waterways

City of Griffin, GA

Formats:

- Adopt-A-Stream program
- Web site: www.griffinstorm.com
- Events
- Hands-on classroom education
- Interactive storm water software for higher education
- Brochures, fact sheets, utility bill inserts, door hangers
- Radio PSAs
- Storm drain stenciling program
- Storm water newsletter

Cost: Between $55,000 and $85,000 per year

TNRCC Nonpoint Source Pollution Education Campaign

Key issues

- Yard care, HHW, pet waste, motor oil

Messages

- “Please don’t feed the storm drain.”

Formats

- TV, radio, print, posters, brochures, events

Sponsored by the Texas Natural Resource Conservation Commission and the U.S. Environmental Protection Agency.
IF YOU THINK
PICKING UP
DOG POOP
IS UNPLEASANT,
TRY DRINKING IT.
Pet waste washes into storm drains, polluting our rivers, lakes and drinking water sources. Get the scoop.
1-800-CLEAN-UP
PLEASE DON'T FEED THE STORM DRAIN

Group Exercise

- Target Audience
- Message
- Distribution
- Evaluation/Measurable Goals